

In The Claims

Cancel claims 2, 4, 6, and 10-12, amend claims 1 and 7, and add new claims 13 and 14, as follows:

Claim 1 (currently amended).

1. An optical connector system for connecting together the ends of first and second sets of optical fibers that each includes a plurality of optical fibers that each have tips, comprising:

5 first and second housing that each has a mating face and that each has a plurality of parallel fiber-receiving bores extending in a longitudinal direction through the corresponding housing to the mating face thereof, with each bore having a front end portion that extends to the mating face of the housing, with said fibers of said first set each extending through a different one of said bores of said first housing and with said fibers of said second set each extending through a
10 different one of said bores of said second housing, with each fiber having an end fixed in position in the corresponding bore;

for each of said housings, the tips of each of said fibers lying in the housing and the mating face of the housing, all lie precisely flush and in a common optical plane;

15 a quantity of potting material lying in each of said bore front end portions and around a fiber portion that lies in the bore front end portion;

each of said bore front end portions has an inside diameter that is ~~less than~~ twice no more than about 110% of the outside diameter of the fiber portion lying therein.

Claim 2 (cancelled).

Claim 3 (original).

3. The system described in claim 1 including:

the diameter of each bore front end portion is no more than 102% of the

diameter of the corresponding fiber portion lying therein.

Claim 4 (cancelled).

Claim 5 (original).

5. The system described in claim 1 wherein:

each of said housings has a front peripheral portion that surrounds the mating face of that housing, with each front peripheral portion including a groove that extends completely around each of the corresponding mating face;

5 a pair of elastomeric seals that each extends in a closed loop and lies in a corresponding one of said grooves, with said seals pressed against each other to seal the volume where said mating faces lie facewise against each other.

Claim 6 (cancelled).

Claim 7 (currently amended).

7. An optical connector arrangement, comprising:

a first housing having front and rear ends, with said front end forming a first planar mating face, said first housing having a plurality of parallel bores with front portions opening to said mating face;

5 a first set of a plurality of optical fibers that each extends through one of said bores, with each fiber having an end portion with a tip lying at said mating face;

a plurality of first quantities of set potting material each lying in one of said bores and around the end portion of the fiber lying in the bore;

10 said mating face lying precisely in a plane and said fiber tips all lying in said plane and flush with said mating face;

said bore front portions each has an inside diameter no more than ~~40%~~
110% of the outside of the corresponding fiber.

Claim 8 (original).

8. The arrangement described in claim 7 wherein:

said housing has a back end portion where said bores merge into a cavity, and said quantities of potting material merge in said cavity, with said housing having walls that close said cavity except at the rear end of said housing, whereby said housing rear end can be uppermost while liquid potting material lies in said cavity and while said fibers are moved forwardly along said bore front end portions.

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Claim 9 (original).

9. The arrangement described in claim 7 including:

a second housing which is identical to said first housing, and which has a second planar mating face, a second set of a plurality of optical fibers lying in bores of said second housing and having fiber tips precisely flush with said second mating face, and a plurality of second quantities of set potting material each lying around an end portion of one of said second fibers that lie in said bores of said second housing;

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said first and second housings being fastened together with their faces lying facewise against each other.

Claim 10 (cancelled).

Claim 11 (cancelled).

Claim 12 (cancelled).

Claim 13 (new).

13. An optical connector system for connecting together the ends of first and second sets of optical fibers that each includes a plurality of optical fibers that each have tips, comprising:

first and second housings that each has a mating face and that each has a plurality of parallel fiber-receiving bores extending in a longitudinal direction

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through the corresponding housing to the mating face thereof, with each bore having a front end portion that extends to the mating face of the housing, with said fibers of said first set each extending through a different one of said bores of said first housing and with said fibers of said second set each extending through a different one of said bores of said second housing, with each fiber having an end fixed in position in the corresponding bore;

for each of said housing, the tips of each of said fibers lying in the housing and the mating face of the housing, and lie precisely flush and in a common optical plane;

a quantity of potting material lying in each of said bore front end portions and around a fiber portion that lies in the bore front end portion;

each of said bore front end portions has an inside diameter that is less than twice the outside diameter of the fiber portion lying therein;

said first and second housings are substantially identical, with each housing having opposite first and second sides and having first and second opposite flanges with first and second holes in each flange wherein each first hole lies closest to said first side and each second hole lies closest to said second side;

a pair of panel mount screws, each lying in the first hole in a first of said flanges and the second hole in the second of said flanges of said first housing, for mounting said first housing on a panel.

Claim 14 (new).

14. An optical connector arrangement, comprising:

a first housing having front and rear ends, with said front end forming a first planar mating face, said first housing having a plurality of parallel bores with front portions opening to said mating face;

a first set of a plurality of optical fibers that each extends through one of said bores, with each fiber having an end portion with a tip lying at said mating

face;

a plurality of first quantities of set potting material each lying in one of said bores and around the end portion of the fiber lying in the bore;

10 said mating face lying precisely in a plane and said fiber tips all lying in said plane and flush with said mating face;

said bore front portions each has an inside diameter no more than 110% of the outside of the corresponding fiber;

15 a second housing which is identical to said first housing, and which has a second planar mating face, a second set of a plurality of optical fibers lying in bores of said second housing and having fiber tips precisely flush with said second mating face, and a plurality of second quantities of set potting material each lying around an end portion of one of said second fibers that lie in said bores of said second housing;

20 said first and second housings being fastened together with their faces lying facewise against each other;

a panel which has a connector-holding area with opposite area ends, with a pair of panel through holes in each area end;

25 each of said housings has opposite ends with flanges at said opposite ends and with a pair of holes in each flange, each pair of holes including first and second holes lying adjacent to said first and second sides, respectively, and each pair of holes of a flange of said first housing being aligned with a pair of holes of a flange of said second housing;

30 a pair of apnea screws each extending through one of said panel holes and through one of said flange holes of said first housing, with a first of said panel screws extending through the first hole in a first of said flanges and through the second hole in a second of said flanges;

a pair of housing connect screws each extending through one of said panel holes and through a hole in a flange of said first connector and through a hole in

- 35** a flange of said second connector, including a first connect screw that extends through the second hole in said first flange of said first housing and a second screw that extends through the first hole in the second flange of said first housing.